Amendments to Claims

1. (Currently Amended) A method of performing a proximity search, comprising the steps of:

(a) receiving ~~a~~ <u>at least one</u> proximity parameter defining a search area encompassing a predetermined position;

(b) calculating a set of latitudes and longitudes approximating the search area based on the <u>at least one</u> proximity parameter; and

(c) comparing the set of latitudes and longitudes to position ~~field~~ information in a plurality of records stored in a database.

2. (Currently Amended) The method of claim 1, further comprising the step of:

(d) determining which of <u>the position information in</u> the plurality of records ~~include position information~~ <u>is</u> within the search area based on step (c).

3. (Currently Amended) The method of claim 1, wherein the<u> at least one</u> proximity parameter is a search radius defining a circular search area centered around the predetermined position, and wherein step (b) further comprises the step of calculating the set of latitudes and longitudes to define a smallest square search area into which the circular search area can fit.

4. (Currently Amended) The method of claim 3, wherein the position information in ~~each of~~ the plurality of records includes a latitude and a longitude associated with a position, and

wherein the smallest square search area covers a latitude range and a longitude range corresponding respectively to a height and a width of the smallest square search area, each the height and the width corresponding to a distance equal to at least twice the at least one proximity parameter, and

wherein step (c) comprises respectively comparing the latitude and the longitude associated with each of the plurality of records to the latitude range and the longitude ranges range covered by the smallest square search area to determine which of the position information in the plurality of records include position information is within the smallest square search area.

5. (Currently Amended) The method of claim 4, wherein step (b) further comprises calculating respective latitudes and longitudes of at least first, second, and third corners of the smallest square search area, wherein the latitude range extends between the latitudes of the first and the second corners of the smallest square search area and the longitude range extends between the longitudes of the second and the third corners of the smallest square search area.

6. (Currently Amended) The method of claim 5, wherein step (b) further comprises calculating the latitudes and the longitudes of at least the first, the second, and the third corners of the smallest square search area, wherein the first and the second corners are at the a same longitude but different latitudes and the second and the third corners are at the a same latitude but different longitudes.

7. (Currently Amended) The method of claim 4, wherein step (b) further comprises the steps of:

calculating an angular width of the smallest square search area, the angular width being subtended by at least the width of the smallest square search area; and

calculating an angular height of the smallest square search area, the angular height being subtended by at least the height of the smallest square search area.

8. (Currently Amended) The method of claim 7, wherein the predetermined position has a predetermined position latitude and a predetermined position longitude, and wherein step (b) further comprises the steps of:

calculating respective latitudes for the first, the second and the third corners using the predetermined position latitude and the angular height of the smallest square search area; and

calculating respective longitudes for the first, the second and the third corners using the predetermined position longitude and the angular width of the smallest square search area.

9. (Currently Amended) The method of claim 8, wherein step (a) comprises the step of receiving an information request associated with the predetermined position and the at least one proximity parameter.

10. (Currently Amended) The method of claim 9, further comprising the step of:

(e)   sending a search result based on the records associated with the position information determined to be within the smallest square search area at step (c), to fulfill the information request.

11.   (Currently Amended) The method of claim 4, wherein step (b) further comprises calculating the circular and the smallest square search areas using a non-planar geometry.

12.   (Currently Amended) The method of claim 4, wherein step (b) further comprises calculating the circular and the smallest square search areas using a planar geometry.

13.   (Currently Amended) A method of performing a proximity search, comprising the steps of:

(a)   receiving a at least one proximity parameter defining a first search area encompassing a predetermined position;

(b)   mapping the first search area to a second search area positioned to encompass the first search area based on the at least one proximity parameter and being defined in terms of a set of latitudes and longitudes; and

(c)   comparing the set of latitudes and longitudes to position information in a plurality of records stored in a database to determine which of the plurality of records include the position information within the second search area.

14. (Currently Amended) The method of claim 13, wherein the at least one proximity parameter is a search radius defining a circular search area centered around the predetermined position, and wherein step (b) comprises mapping the circular search area to a smallest square search area into which the circular search area can fit.

15. (Currently Amended) A system for performing a proximity search, comprising:

a database including a plurality of records for storing position field information; and

a proximity searcher that receives a at least one proximity parameter defining a search area encompassing a predetermined position,

calculates a set of latitudes and longitudes approximating the search area based on the at least one proximity parameter, and

compares the set of latitudes and longitudes to the position field information in a the plurality of records stored in a the database.

16. (Currently Amended) The system of claim 15, wherein the proximity searcher is adapted to determine which of the plurality of records include the position information within the search area based on the a comparison between the set of latitudes and longitudes and the position field information in the plurality of database records.

17. (Currently Amended) The system of claim 15, wherein the at least one proximity parameter is a search radius defining a circular search area centered around the predetermined position, and wherein the proximity searcher is adapted to calculate the

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Jeremy S. Cooper
Appl. No. 09/840,922

set of latitudes and longitudes to define a smallest square search area into which the

circular search area can fit.

18. (Currently Amended) The system of claim 17, wherein the position

information in ~~each of~~ the plurality of records includes a latitude and a longitude

associated with a position, and

wherein the smallest square search area covers a latitude range and a longitude

range corresponding respectively to a height and a width of the <u>smallest</u> square <u>search</u>

<u>area,</u> ~~each~~ <u>the height and the width</u> corresponding to a distance equal to at least twice the

<u>at least one</u> proximity parameter, and

wherein the proximity searcher is adapted to respectively compare the latitude

and <u>the</u> longitude associated with ~~each of~~ the plurality of records to the latitude <u>range</u> and

<u>the</u> longitude ~~ranges~~ <u>range</u> covered by the smallest square search area to determine which

of <u>the position information in</u> the plurality of records ~~include position information~~ <u>is</u>

within the <u>smallest</u> square search area.

19. (Currently Amended) The system of claim 18, wherein the proximity

searcher is adapted to compare respective latitudes and longitudes of at least first,

second, and third corners of the <u>smallest</u> square <u>search</u> area, wherein the latitude range

extends between the latitudes of the first and <u>the</u> second corners <u>of the smallest square</u>

<u>search area</u> and the longitude range extends between the longitudes of the second and <u>the</u>

third corners of the <u>smallest</u> square <u>search</u> area.

20. (Currently Amended) The system of claim 19, wherein the proximity searcher is adapted to calculate the latitudes and the longitudes of at least the first, the second, and the third corners of the smallest square search area, wherein the first and the second corners are at the a same longitude but different latitudes and the second and the third corners are at the a same latitude but different longitudes.

21. (Currently Amended) The system of claim 18, wherein the proximity searcher is adapted to

calculate an angular width of the smallest square search area, the angular width being subtended by at least the width of the smallest square search area, and

calculate an angular height of the smallest square search area, the angular height being subtended by at least the height of the smallest square search area.

22. (Currently Amended) The system of claim 21, wherein the predetermined position has a predetermined position latitude and a predetermined position longitude, and wherein the proximity searcher is adapted to

calculate respective latitudes for the first, the second and the third corners using the predetermined position latitude and the angular height of the smallest square search area, and

calculate respective longitudes for the first, the second and the third corners using the predetermined position longitude and the angular width of the smallest square search area.

23. (Currently Amended) The system of claim 22, wherein the proximity searcher is adapted to receive an information request associated with the predetermined position and the at least one proximity parameter.

24. (Currently Amended) The system of claim 23, wherein the proximity searcher is adapted to send a search result based on the records associated with the position information determined to be within the smallest square search area, to fulfill the information request.

25. (Currently Amended) The system of claim 18, wherein the proximity searcher is adapted to calculate the circular and the smallest square search areas using a non-planar geometry.

26. (Currently Amended) The system of claim 18, wherein the proximity searcher is adapted to calculate the circular and the smallest square search areas using a planar geometry.

27. (Currently Amended) A computer program product comprising computer usable media having computer readable program code means embodied in the media for causing application programs to execute on a computer processor to perform a proximity search, the computer readable program code means comprising:

a first computer readable program code means for causing the processor to receive a at least one proximity parameter defining a search area encompassing a predetermined position;

a second computer readable program code means for causing the

processor to calculate a set of latitudes and longitudes approximating the search area

based on the at least one proximity parameter; and

a third computer readable program code means for causing the processor

to compare the set of latitudes and longitudes to position-field information in a plurality

of records stored in a database.

28. (Currently Amended) The computer program product of claim 27, further

comprising a fourth computer readable program code means for causing the processor to

determine which of the position information in the plurality of records include position

information is within the search area based on the a comparison between the set of

latitudes and longitudes and the position-field information in the records.

29. (Currently Amended) The computer program product of claim 27, wherein

the at least one proximity parameter is a search radius defining a circular search area

centered around the predetermined position, and wherein the second program code

means includes computer readable program code means for causing the processor to

calculate the set of latitudes and longitudes to define a smallest square search area into

which the circular search area can fit.

30. (Currently Amended) The computer program product of claim 29, wherein

the position information in each of the plurality of records includes a latitude and a

longitude associated with the record a position, and

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wherein the smallest square search area covers a latitude range and a longitude

range corresponding respectively to a height and a width of the smallest square search

area, each the height and the width corresponding to a distance equal to at least twice the

at least one proximity parameter, and

wherein the third program code means includes computer readable program code

means for causing the processor to respectively compare the latitude and the longitude

associated with each of the plurality of records to the latitude range and the longitude

ranges range covered by the smallest square search area to determine which of the

position information in the plurality of records include position information is within the

smallest square search area.

31. (Currently Amended) The computer program product of claim 30, wherein

the second computer program code means includes computer readable program code for

causing the processor to calculate respective latitudes and longitudes of at least first,

second, and third corners of the smallest square search area, wherein the latitude range

extends between the latitudes of the first and the second corners of the smallest square

search area and the longitude range extends between the longitudes of the second and the

third corners of the smallest square search area.

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32. (New) The method of claim 1, wherein the at least one proximity parameter

is a single proximity parameter.

33. (New) The method of claim 13, wherein the at least one proximity parameter

is a single proximity parameter.

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34. (New) The system of claim 15, wherein the at least one proximity parameter is a single proximity parameter.

35. (New) The computer program product of claim 27, wherein the at least one proximity parameter is a single proximity parameter.

This listing of claims will replace all prior versions, and listings of claims in the application.